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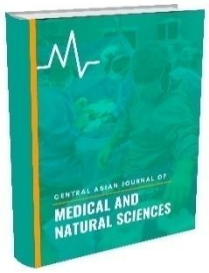

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Morphometric Indices of Tissue Structures During Periods of Safe Prostatic Hyperplasia Хамраев

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Abstract: this article calculates and analyzes morphometric indices of tissue structures during the periods of malignant prostatic hyperplasia development. As material, morphometric calculations of biopsies from patients diagnosed with safe prostatic hyperplasia were performed. In safe prostatic hyperplasia, there was a dramatic increase in the parenchymatous glandular structures in the gland tissue and the area occupied by the glandular epithelium therein, according to the periods of the disease. It was found that the area of fibrous tissue in the stroma was increased and the area of smooth muscle cells and inflammatory infiltrate was decreased, monandically increasing the hyperplasia of the glandular epithelium and expanding the area. It was observed that by the 3rd period of the disease, the area occupied by smooth muscle cells decreased by 1.7 times compared to the 1st period, and the area of inflammatory infiltrate decreased by 2 times.

Key words: prostate gland, hyperplasia, glandular epithelium, fibrous tissue, inflammatory infiltrate.

Introduction: Prostatic hyperplasia is a process in which the increase in the size of the gland is due to an increase in the tissue, the volume of intracellular organelles of the cells, that is, hypertrophy. Prostate tissue is known to have both parenchymatous and stromal tissue structures, which are hypertrophied to a lesser extent and proliferate mainly due to hyperplasia. Considering these histogenetic and morphogenetic mechanisms, a 3rd period is distinguished: 1st period of compensation, in which the size of the gland is 30 cm3, there are no signs on the bladder side, there is only a slight hypertrophy of the bladder wall; 2nd period of subcompensation - the influence of the prostate gland on the urethra is strongly felt pressure, the bladder wall is hypertrophied, as a result of pus accumulation, there is a dilation of the ureters, obliques, jejunum and renal pelvis. With slow asceticism, renal failure develops; 3- period of decompensation - the bladder filled with urine cannot empty completely, indicating that the bladder wall is unable to contract in the hypertrophied bladder. Thus, the drop of fluid that is in the bladder cavity comes out. A sign of urinary incontinence is observed, the person is unable to empty his forehead completely even at will, this condition requires prompt surgical treatment.

During compensation 1, hyperplasia of some glandular structures occurs, leading to the formation of adjacent cholic asynar structures. In this case, it is observed that the connective tissue of the stroma overgrows around these appendages of hyperplated glands. During stage II of subcompensation, the hyperplasia of the anterior glands intensifies, leading to the formation of proliferative areas consisting of individual glandular structures. During this period, small glandular structures in isolated areas of the prostate gland hyperplasticize, creating small glandular foci between which thin connective tissue proliferates and enlarges. If the glandular structures make up the majority of the glandular hyperplasia, fibrous adenosis is called fibrous adenosis if there are a large number of intervening tissue structures. It will be possible to determine the period of safe prostatic hyperplasia depending on the degree of reproduction of the underlying pareximatous structures or the composition of the stromal tissue within it. When the reproduction of certain tissue structures has been qualitatively assessed and the area occupied by a particular tissue structure in the gland tissue has been quantified, it will be possible to determine the degree of hyperplasia of the gland tissue according to the degree of reproduction or reduction of the quantitative indicator. indicators. Therefore, in this study, the level of hyperplasia was assessed by calculating the area occupied by tissue structures in it according to the periods of development of prostate cartilage hyperplasia.

Results of the study and their discussion. In clinical and morphological 3rd cycle of safe prostatic hyperplasia, morphometric calculations were performed to determine the degree of this pathological process, the nature of dysregenerative processes of tissue structures and quantitative transformation of tissue structures of the parenchyma and stroma of the gland. The calculations were carried out according to the method of "scoring" of G.G. Avtandilov. The results of the calculation showed that it was found that the area of glandular epithelium, representing parenchymatous structures, prevails in the structure of glandular tissue during compensation of 1 safe prostatic hyperplasia. It was found that glandular epithelial structures occupied 23.4% of the total area, connective tissue structures between them occupied 21.9%, smooth muscle cells 18.5%, blood vessels 19.4% and inflammatory infiltrate 16.8%. From this it can be seen that in terms of morphologic and morphometric parameters typical of period 1 of safe prostatic hyperplasia, the area occupied by glandular epithelium and fibrous tissue was predominant, while inflammatory infiltrate occupied a certain level of space in the tissue. During this period, it was observed that the glandular epithelium activity ratio was 1.07 and the fibrous tissue activity ratio was 1.18.

During the II-subcompensation period of safe prostatic hyperplasia, there is impairment of excretory reflex due to hyper enlargement of the organ. It was observed that morphometrically, the area occupied by the cluster of epithelial cells in the gland tissue increased by 7% compared to period 1 and 11% compared to period 2. When these morphometric indices are seen graphically, it is observed that the column of glandular epithelium increased 2 times more than normal by period 3 of the disease.

It was found that the fibrous tissue contained in the stroma of the gland also increased in the monad, which led to an increase in the hyperplasia of the gland epithelium, the area occupied by it increased by 3.6% compared to the previous period. The hyperplasia of fibrous tissue was found to be due to a decrease in the number of smooth muscle cells in the stroma, and smooth muscle tissue was found to occupy 13.2% of the space during this period. During this subcompensation of the disease, it was found that the existing inflammatory infiltrate in the glandular tissue decreased and the occupied area decreased by 3.5% compared to the previous period, occupying 13.4% of the space. It was found that during the II period of subcompensation of prostatic hyperplasia disease, the activity ratio of glandular epithelium reached 1.25 degrees, the activity ratio of fibrous tissue increased even more compared with the previous period and increased to 1.84 degrees .

During the III-decompensation period of prostate safe hyperplasia, it was observed that the area occupied by the epithelium increased dramatically due to the hyperplasia of glands in the gland tissue, the area occupied by it also expanded dramatically due to the differentiation of unformed connective tissue, smooth muscle cells and inflammatory infiltrate into rough and dense fibrous tissue.

It was found that the area occupied by the glandular epithelium during disease decompensation III increased by 11.0% compared with recovery period 1 and by 4% compared with subcompensation period 2. It was observed that the area occupied by coarse fibrous fibrotic connective tissue in the stroma without monad and increased by hyperplasia of the glandular epithelium increased by 7.2% compared to the 1st period of compensation and by 4.1% compared to the 2nd period of subcompensation. When this image is analyzed as a graph, there is a dramatic lengthening of the fibrous tissue column and shortening of the smooth muscle tissue column. As a result, it was found that the activity ratio of fibrous tissue increased by 2.75 degrees during this 3rd period, which is 2.3 times higher than in cycle 1 and 1.5 times higher than in cycle 2. During this period, the formation of smooth muscle cells in the stroma of the gland into metaplasia is accelerated, and its transformation into fibrous tissue is observed. It was found that the area occupied by smooth muscle tissue was reduced by keskn and amounted to 10.4% in this 3rd period, and it was confirmed that this figure was 2 times less than in the 1st period. The scientific literature indicates the degree of participation of the inflammatory process in the etiopathogenesis of the disease of prostatic hyperplasia. In the dynamics of the development of this disease, the inflammatory infiltrate in the structure of the gland tissue decreases, and the swelling of fibrous connective tissue replaced by it accelerates. The result of morphometric calculations shows that the area occupied by the inflammatory infiltrate in the gland tissue by the period of decompensation amounted to 8.7%, which decreased 2 times in comparison with the index of the 1st period. When these data are also seen in the graphical representation, it is observed that the column of inflammatory infiltrate sharply shortens in severe periods of the disease.

Conclusions: In safe prostatic hyperplasia, there was a dramatic increase in the parenchymatous glandular structures in the gland tissue and the area occupied by the glandular epithelium therein, according to the periods of the disease.

It was found that the area of fibrous tissue in the stroma was increased and the area of smooth muscle cells and inflammatory infiltrate was decreased, which monandized the hyperplasia of the glandular epithelium and expanded the area.

It was observed that the area occupied by smooth muscle cells decreased 1.7-fold by the 3rd period of the disease compared to the 1st period, and the area of inflammatory infiltrate decreased 2-fold.

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